

PRIVATE EMERGENCY OR SERVICE-SPECIFIC  
CALL APPROACH IN GSM SYSTEMS

ABSTRACT OF THE DISCLOSURE

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A technique for implementing Special Call Services (SCS) to extend wireless system functionality to include private emergency or other types of service-specific special calls in a private network. In a preferred embodiment, the capability is implemented by taking advantage of certain service type elements that may be coded in the Radio Resource Management (RR) functional layer channel request message and /or the Mobility Management (MM) functional layer call request messages in a Global System for Mobile (GSM) communication system. Specifically, an establishment cause field in a RR channel request message and/or a service type field in a MM request message is used to request such services from the network. These establishment causes and service types can be defined, but not limited to, using those codes currently defined as reserved by GSM Version 4.08, Section 9.1.8 and Section 10.5.3.3. Thus, these newly added codes do not require any re-programming of the deployed GSM equipment and impact on their current operation, either. A GSM system that implements the invention preferably contain a Radio Resource (RR) functional entity that watches for a newly added SCS causes and takes them into account when granting physical resources to the requesting unit. Such actions may include, but are not limited to, dropping a normal call-in-process in order to accommodate the SCS call if there are no free physical resources left, prioritizing SCS calls in progress, or other techniques for allocating a physical channel to the SCS channel request. Such techniques may include allocating radio resources which are reserved in advance for the SCS cause.

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